

#### **Remarks / Arguments**

Claims 1- 5 are pending in this application. Claims 1- 5 are rejected. With this Amendment, claims 1-5 are amended.

In view of these amendments the applicants believe that all of the claims now present in the application – in their present form – are allowable.

It is submitted that each of the various rejections are overcome through the effect of the clarifying amendments or by various arguments presented herein

Entry of this amendment is appropriate since the amendments (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issues requiring further search and/or consideration; (c) do not present any additional claims and (d) place the application in better form for appeal - should such appeal be necessary. Entry of the amendments is therefore respectfully requested.

If however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone John F. Moran, ESQ. At 973-724-6590, so that arrangements may be made for resolving such issues as expeditiously as possible.

#### **Claim Rejections – 35 U.S.C. § 103**

Claims 1 – 5 are rejected under the provisions of 35 U.S.C. § 103 as being unpatentable over United States Patent 5,602,361 to Hamilton and Bagline, in view of United States Patent 6,228,192 to Neidert, Scheffee, Bowman, and Martin, and United States Patent 6,67,618 to Manning and Prezelski.

In view of the amendments presented above, the applicants submit that their claimed formulation is not obvious in view of the cited references.

As noted by the former attorney of record in this case, the present invention is a nitrocellulose-based single-base propellant containing neither the nitroglycerine of the

Hamilton patent, the 5-aminotetrazole of the Neidert patent, or the nitroguanidine of the Manning and Prezelski patent.

As correctly noted by the Examiner in a previous office action however, the previously presented claim language was such that it did not exclude such additions to the claimed formulation.

In response, the applicants have amended the claim language in claims 1-5 such that they now exclude such additions to the formulation.

The applicants believe that this is particularly significant as while inert plasticizers reduce sensitivity, they also reduce performance. Energetic plasticizers on the other hand, typically enhance performance, but with an accompanying increase in sensitivity. As noted in the present specification – at paragraph 26 – BuNena – in sharp contrast to other plasticizers used in the art – imparts an increase in energy and reduced sensitivity.

Accordingly, the applicants submit that its inclusion in a formulation such as that now claimed – is not obvious in view of the cited references – in any combination.

And while Neidert et al does employ a class of nitrate esters – including BuNena – that reference explicitly discloses a double-base propellant having substantial energetic solid loading. Accordingly, any loss in energetic performance resulting from the inclusion of BuNena in such a formulation would be compensated by the addition of an energetic solid. Since the claimed invention of the instant application is a single-base propellant, the use of BuNena would be viewed by those skilled in the art as degrading the performance of the propellant. In that regard the material composition now claimed produces a surprising result – having both reduced sensitivity and increased energy.

Accordingly, the applicants respectfully request the Examiner to withdraw the rejections under 35 U.S.C. § 103.

Appl. No. 10/711,651  
Amnd. Dated 29-Apr-08, 2007  
Reply to Office Action of 14-NOV-2007

### Conclusion

The applicants submit that all of the claims now present in the application in their present form - fully comply with the provisions of 35 U.S.C. § 103 and are therefore allowable. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,

s/John F. Moran  
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### CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office on April 29, 2008.

s/John F. Moran/

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